Data Sheet
Fujitsu PRIMERGY RX600 S6 Quad socket 4 U rack server

Scalability and balanced composition ensure your growth

The PRIMERGY RX Rack Server family is the perfect platform to form dynamic infrastructures for your business processes today and in the coming decade. You will thus benefit several times over from our recognized experience in optimized data center technology and our innovative strength in developing energy-efficient and cost/performance-optimized rack systems for universal use. PRIMERGY rack servers, built upon industry standards, focus from a functional viewpoint on core features: energy efficiency, reliability, optimized for virtualization, ease of operation and maintenance, flexibility for your future. And thus they notably meet your requirements for outstanding cost efficiency. Optimal operating costs and long-term usability comply with the IT quality required by your customers. Our responsibility goes way beyond the hardware as our tailor-made service packages mean that you can rely on the best support for your IT during its whole lifecycle.

PRIMERGY RX600 S6

Extensive usage of industry standard x86 based platforms is becoming more important than ever: be it as database management system for medium or large-sized databases or as a consolidation basis to run an immensely large number of different applications using virtualization technologies. The scalable PRIMERGY RX600 S6 is in every respect a reliable server for such critical company scenarios. The ideal interaction of integrated redundancy functions with server management components results in high-level availability and constantly efficient IT production as a character feature of this server platform.
The latest generation of Intel Xeon processors equipped with up to 10 state-of-the art cores enable a unique performance boost which however does not bear optimal dividends unless paired with other features: a high extendable main memory capacity with up to 64 DIMMs and a very high number of performant PCI Express channels provide a balanced high throughput architecture so as to meet increasing requirements.
This and the continued evolution of virtualization support via Intel® components (processor, I/O controller) enable a greater consolidation of servers and applications with all the market relevant virtualization solutions , resulting in excellent best-in-class efficiency.

Features and Benefits

Main Features	Benefits
Scale-up Performance for Growth	
■ Using the scalable Intel® QPI architecture in this 4 CPU sockets server results in an excellent increase in performance when compared to the older Front Side Bus server generations. Thanks to the integration of two memory controllers per processor, the CPU to memory bandwidth has been raised up to a factor of 9. Together with the quadrupled maximum memory capacity and the new processor generation with up to 10 cores per processor and 2 threads per core, the system performance achieves unprecedented growth factors.	■ This system is designed for critical corporate applications and large scale consolidation. Its new architecture ensures for even more efficient deployment of demanding scale-up computing needs. Irrespective of the server usage, as database or virtualization system, the performance can always be extended so that no bottlenecks can arise as a result of low processor performance or main memory capacity.
Balanced Scalability	
■ Balanced scale-up performance is achieved by combining various processor choices, using up to 4 x Intel® Xeon® E7-4800 or up to 2 x Intel® Xeon® E7-2800 processors, with PCI Express Generation 2 I/O busses and up to 64 memory DIMMs on 8 configurable memory boards.	■ More demanding database loads can be hosted on RX600 S6 with peace of mind, capitalizing on high performance I/O, massive computing power and 1 TB of local memory (up to 2 TB as soon as released) . ■ Large scale consolidation of tier 1 and tier 2 workloads into virtual machines benefit from the high platform reliability and its balanced scaleability. ■ More consolidation and virtualization efficiency is obtained by using less server instances with the scale-up RX600 S6 platform. Deployment of "fat VMs" for demanding tier 2 applications can be combined with large scale consolidation of tier 1 virtual machines onto significantly less management instances.
Integrated High Availability as standard	
■ ECC and SDDC memory protection, memory mirroring support, hot-plug Memory Boards with socket-overlapping memory mirroring, hot-plug redundant fans and power supplies as standard, up to 8x hot-plug 2.5-inch SAS/SATA hard disks, hot-plug PCIe slots ■ LocalView display and integrated Remote Management Controller (iRMC S2) IPMI 2.0 as standard	■ Enhanced server reliability without extra cost, operational continuity which means more value for your money as well as secured data safety. ■ Secure management control from wherever your experts are located.

Technical details

PRIMERGY RX600 S6	
Housing type	Rack
Mainboard	
Mainboard type	D 3141
Chipset	Intel® 7500 / 7510 Scalable Memory Buffer
Processor quantity and type	2 - 4 x Intel® Xeon® processor E7-2800 series / Intel® Xeon® processor E7-4800 series / Intel® Xeon® processor E7-8800 series
Processor	Intel® Xeon® processor E7-2803 (6C/12T, 1.73 GHz, SLC: -, TLC: 18 MB, Turbo: No, 4.8 GT/s, 105 W)
	Intel® Xeon® processor E7-2850 (10C/20T, 2.00 GHz, SLC: -, TLC: 24 MB, Turbo: 1/1/2/3/3, 6.4 GT/s, 130 W)
	Intel® Xeon® processor E7-4807 (6C/12T, 1.86 GHz, SLC: -, TLC: 18 MB, Turbo: No, 4.8 GT/s, 95 W)
	Intel® Xeon® processor E7-4820 (8C/16T, 2.00 GHz, SLC: -, TLC: 18 MB, Turbo: 0/1/1/1/2, 5.86 GT/s, 105 W)
	Intel® Xeon® processor E7-4830 (8C/16T, 2.13 GHz, SLC: -, TLC: 24 MB, Turbo: 0/1/1/1/2, 6.4 GT/s, 105 W)
	Intel® Xeon® processor E7-4850 (10C/20T, 2.00 GHz, SLC: -, TLC: 24 MB, Turbo: 1/1/2/3/3, 6.4 GT/s, 130 W)
	Intel® Xeon® processor E7-4860 (10C/20T, 2.26 GHz, SLC: -, TLC: 24 MB, Turbo: 1/1/2/3/3, 6.4 GT/s, 130 W)
	Intel® Xeon® processor E7-4870 (10C/20T, 2.40 GHz, SLC: -, TLC: 30 MB, Turbo: 1/1/2/3/3, 6.4 GT/s, 130 W)
	Intel® Xeon® processor E7-8837 (8C/8T, 2.67 GHz, SLC: -, TLC: 24 MB, Turbo: 0/1/1/1/1, 6.4 GT/s, 130 W)
Processor notes	A mimimum of 2 processors must be configured, no mix of different processor types E7-2800 CPU´s can be configured max. 2x
Memory slots	64 (distributed on 8 memory boards with 8 slots each)
Memory slot type	DIMM (DDR3) LV
Memory capacity (min. - max.)	8 GB - 2048 GB
Memory protection	Advanced ECC SDDC Memory Scrubbing Memory DIMM Sparing support Memory Mirroring support
Memory notes	Memory modules are installed on memory boards (8 DIMM slots per memory board) Two memory boards are preinstalled in base unit, further memory boards as option
Memory options	16 GB (4 module(s) 4 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM
	32 GB (4 module(s) 8 GB) DDR3 LV, registered, ECC, 1066 MHz, PC3-8500, DIMM
	32 GB (4 module(s) 8 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM
	64 GB (4 module(s) 16 GB) DDR3 LV, registered, ECC, 1066 MHz, PC3-8500, DIMM
Memory modules notes	Memory modules will be delivered in set´s of 4 DIMMs per order code. Intel® 7510 Scalable Memory Buffer supports max. 1066MHz memory clock speed. Clock speed is also depending on the processor type. 2TB memory capacity will be possible when 32GB DIMM modules are available.
Interfaces	
USB ports	6 x USB 2.0 (3 x front, 2 x rear, 1 x internal)
Graphics (15-pin)	2 x VGA (1 x front, 1 x rear)
Serial 1 (9-pin)	1 x RS-232-C

Interfaces	
LAN / Ethernet Server	4 x Gbit/s Ethernet (RJ45)
Service LAN (RJ45)	1 x dedicated service LAN port for iRMC S2 (10/100 Mbit/s) Service LAN traffic can be switched to shared onboard Gbit LAN port
Onboard or integrated Controller	
RAID controller	8 Port SAS RAID 0/1 or RAID 5/6 controller as option See under Components RAID controller
LAN Controller	2 x Intel® 82576, 4 x 10/100/1000 Mbit/s Ethernet, TCP/IP acceleration, PXE boot via LAN from PXE server
Remote Management Controller	Integrated Remote Management Controller (iRMC S2, 32 MB attached memory incl. graphics controller), IPMI 2.0 compatible
Trusted Platform Module (TPM)	Infineon / separate module; TCG V1.2 compliant (option)
Slots	
PCI-Express 2.0 x4 (mech. x8)	3 x Full height (2 x ½ length, 1 x ¾ length)
PCI-Express 2.0 x8	4 x Full height (all ¾ length, 2x hot-plug)
PCI-Express 2.0 x16	1 x Full height (all ¾ length)
PCI-Express x4 (mech. x8)	2 x Half height (all ½ length)
Storage drive bays	8 x 2.5-inch hot-plug
Accessible drive bays	1 x 5.25/0.5-inch for CD-RW/DVD 1 x 5.25/1.6-inch for backup devices
General system information	
Number of fans	8
Fan configuration	hot-plug
Operating panel	
Operating buttons	On/off switch NMI button Reset button ID button
Status LEDs	System status (orange / yellow) Identification (blue) Hard disks access (green) Power (amber / green) At system rear side: System status (orange / yellow) Identification (blue)
Service display	ServerView Local Service Display (LSD)
BIOS	
BIOS features	ROM based setup utility Recovery BIOS BIOS settings save and restore Local BIOS update from USB device Online update tools for main Windows and Linux versions Local and remote update via ServerView Update Manager SMBIOS V2.4 Remote PXE boot support Remote iSCSI boot support

Operating Systems and Virtualization Software

Certified or supported operating systems and virtualization software	Microsoft® Hyper-V™ Server 2008 R2
	Microsoft® Windows Server® 2008 R2 Datacenter
	Microsoft® Windows Server® 2008 R2 Enterprise
	Microsoft® Windows Server® 2008 R2 Standard
	Microsoft® Windows® Server 2008 Datacenter
	Microsoft® Windows® Server 2008 Enterprise
	Microsoft® Windows® Server 2008 Standard
	VMware vSphere™ 5.0 Embedded
	VMware vSphere™ 5.0
	VMware vSphere™ 4.1
	VMware vSphere™ 4.1 Embedded
	VMware vSphere™ 4.1 Installable
	Novell® SUSE Linux Enterprise Server 11
	Novell® SUSE Linux Enterprise Server 10
	Novell® SUSE Linux Enterprise Server 10 with XEN
	Red Hat® Enterprise Linux 6
	Red Hat® Enterprise Linux 5
	Red Hat® Enterprise Linux 5 with XEN
	Citrix® XenServer®
Operating system release link	http://docs.ts.fujitsu.com/dl.aspx?id=a9e600b9-e4cb-4f48-aa41-632f69058421
Operating system notes	Support of other Linux derivatives on demand

Server Management

Standard	ServerView Suite - Deploy SV Installation Manager SV Scripting Toolkit SV Deployment Manager (30-day trial version) ServerView Suite - Control SV Operations Manager incl. PDA and ASR & R (Prefailure and Analysis; Automatic Server Recovery and Restart) SV Performance Management SV Power Management SV RAID Manager ServerView Suite - Maintain SV Remote Management (iRMC) SV Update Management (BIOS, Firmware, Windows Drives and SV Agents) SV Asset Management SV Online Diagnostics ServerView Suite - Integrate SV Integration packs e.g. for Microsoft System Center, Nagios, HP, SIM, HP NNM, IBM Tivoli, Altiris Deployment Solutions and others
Option	ServerView Suite - Deploy SV Deployment Manager (full version) ServerView Suite - Maintain iRMC Advanced Pack incl. Advanced Video Redirection (AVR) and Remote Storage ServerView Suite - Dynamize SV Virtual-IO Manager (VIOM) SV Resource Orchestrator Virtual Edition (ROR VE) SV Resource Orchestrator Cloud Edition (ROR CE) ServerView Suite - Integrate SV Integration pack for Fujitsu ManageNow® solution
Server Management notes	Regarding Operating System dependencies and product details for ServerView Suite Software Products see dedicated Product Data sheets.

Dimensions / Weight

Rack (W x D x H)	482.6 mm (Bezel) / 445mm (Body) x 765 x 176 mm
Mounting Depth Rack	728 mm

Dimensions / Weight	
Height Unit Rack	4 U
19" rackmount	Yes
Mounting Cable depth rack	100 mm (1000 mm Rack recommended)
Weight	max. 46 kg
Weight notes	Actual weight may vary depending on configuration
Rack integration kit	Rack integration kit as option

Environmental	
Operating ambient temperature	10 - 35°C
Operating relative humidity	10 - 85 % (non condensing)
Operating environment	FTS 04230 Guideline for Data Center (installation locations)
Operating environment Link	http://docs.ts.fujitsu.com/dl.aspx?id=d4ebd846-aa0c-478b-8f58-4cfbf3230473
Noise emission	Measured according to ISO 7779 and declared according to ISO 9296
Sound pressure (LpAm)	50 dB(A) (idle) / 50 dB(A) (operating)
Sound power (LWAd; 1B = 10dB)	6.5 B (idle) / 6.6 B (operating)
Noise notes / description	at ambient temperature <23°C

Electrical values	
Power supply configuration	Up to 4 hot plug power supplies. Base unit equipped with 2 power supplies, 3rd and 4th PSU as option
Max. output of single power supply	850 W
Power supply efficiency	92% (at 50% PSU load, CSCI "gold")
Hot-plug power supply redundancy	Yes
Rated voltage range	100 V - 127 V / 200 V - 240 V
Rated frequency range	47 Hz - 63 Hz
Rated current max.	26 A / 11 A (100 V / 240 V)
Active power (min. configuration)	750 W
Active power (max. configuration)	1790 W
Rated power max.	2640 W
Heat emission	6444.0 kJ/h (6107.7 BTU/h)

Compliance	
Germany	GS
Europe	CE Class A *
USA/Canada	CSAc/us FCC Class A
Global	CB RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronical equipment)
Japan	VCCI
Taiwan	BSMI
Compliance notes	There is general compliance with the safety requirements of all European countries and North America. National approvals required in order to satisfy statutory regulations or for other reasons can be applied for on request. * Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
Compliance link	http://sp.ts.fujitsu.com/sites/certificates/

Components

Storage disks	SSD SATA, 3 Gb/s, 64 GB, SLC, hot-plug, 2.5-inch, enterprise
	SSD SATA, 3 Gb/s, 32 GB, SLC, hot-plug, 2.5-inch, enterprise
	SSD SAS, 6 Gb/s, 400 GB, SLC, hot-plug, 2.5-inch, enterprise
	SSD SAS, 6 Gb/s, 200 GB, SLC, hot-plug, 2.5-inch, enterprise
	SSD SAS, 6 Gb/s, 100 GB, SLC, hot-plug, 2.5-inch, enterprise
	PCIe SSD, 640 GB, MLC, Flash drive
	PCIe SSD, 320 GB, MLC, Flash drive
	HDD SAS, 6 Gb/s, 900 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 600 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 450 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 300 GB, 15000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 300 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 146 GB, 15000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 73 GB, 15000 rpm, hot-plug, 2.5-inch, enterprise
Hard disk notes	One Gigabyte equals one billion bytes, when referring to hard disk drive capacity. Accessible capacity may vary, also depending on used software.
Backup Drives	DDS Gen5, 36 GB, 3 MB/s, half height, USB 2.0
	DDS Gen6, 80 GB, 6 MB/s, half height, USB 2.0
	LTO3HH Ultrium, 400 GB, 60 MB/s, half height, SAS 3Gb/s
	LTO4HH Ultrium, 800 GB, 120 MB/s, half height, SAS 6Gb/s
	LTO5HH Ultrium, 1500 GB, 140 MB/s, half height, SAS 6Gb/s
	RDX Drive, 160 GB, 320 GB, 500 GB, 1 TB , 25 MB/s, half height, USB 2.0
Optical drives	Blu-ray Disc™ Triple Writer, (6x BD-ROM ; 8x DVD; 24x CD), slimline, SATA I
	DVD Super Multi, (8xDVD/DVD+RW, 6xDVD-RW, 5xDVD-RAM; 24xCD/CD-R, 16xCD-RW), slimline, SATA I
SCSI / SAS Controller	SCSI Ctrl. 320 MB 1ch int/ext PCIe x1
	SAS Ctrl. 6 Gb 8 ports ext. PCIe Gen2 x8
	SAS Ctrl. 3 Gb 4 ports int. / 4 ports ext. PCIe x4
RAID Controller	Integrated RAID 5/6 Ctrl., HDD SAS 6 Gb, Fujitsu , 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 512 MB Cache, Optional BBU (based on LSI SAS2108)
	Integrated RAID 0/1 Ctrl., SAS/SATA 6 Gb, Fujitsu , 8 ports int. RAID level: 0, 1, 10, No BBU support (based on LSI SAS2008)
	Integrated RAID 0/1 Ctrl., SAS/SATA 3 Gb, 4 ports int. RAID level: 0, 1, 1E, No BBU support (based on LSI 1064e)
Fibre Channel controller	Fibre Channel Host Bus Adapter 1 x 8 Gb Qlogic QLE2560 MMF LC-style
	Fibre Channel Host Bus Adapter 2 x 8 Gb Qlogic QLE2562 MMF LC-style
	Fibre Channel Host Bus Adapter 1 x 8 Gb Emulex LPe1250 MMF LC-style
	Fibre Channel Host Bus Adapter 2 x 8 Gb Emulex LPe12002 MMF LC-style
LAN Controller	Converged Network Adapter 2 x 10 Gb Emulex OCe10102
	Ethernet Ctrl. 1 x 1 Gb Intel® PRO/1000 PF Server Adapter
	Ethernet Ctrl. 2 x 10 Gb Fujitsu Eth Ctrl 2x10Gbit PCIe x8 D2755 SFP+
	Ethernet Ctrl. 2 x 1 Gb Fujitsu LAN Adapter D2735-2
	Ethernet Ctrl. 4 x 1 Gb Fujitsu Eth Ctrl 4x1Gbit PCIe x4 D2745 Cu
	InfiniBand HCA 1 x 40 Gb Mellanox
	InfiniBand HCA 2 x 40 Gb Mellanox

Rack infrastructure	Cable Arm 2U for PCR M1 S and 3rd party racks
	Rackmount kit full extraction (760mm), tool less mounting with quick release lever
	Cable Management for asym. 19-inch PRIMECENTER Racks

Warranty	
Standard Warranty	3 years
Service level	On-site Service (depending on country)
Maintenance and Support Services - the perfect extension	
Recommended Service	7x24, Onsite Response Time: 4h - For locations outside of EMEA please contact your local Fujitsu partner.
Service Lifecycle	5 years
Service Weblink	http://www.fujitsu.com/fts/services

More information

Fujitsu platform solutions

In addition to Fujitsu PRIMERGY RX600 S6, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Dynamic Infrastructures
With the Fujitsu Dynamic Infrastructures approach, Fujitsu offers a full portfolio of IT products, solutions and services, ranging from clients to datacenter solutions, Managed Infrastructure and Infrastructure as-a-Service. How much you benefit from Fujitsu technologies and services depends on the level of cooperation you choose. This takes IT flexibility and efficiency to the next level.

Computing Products
www.fujitsu.com/global/services/computing/

Software
www.fujitsu.com/software/

More information

Learn more about Fujitsu PRIMERGY RX600 S6, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
http://www.fujitsu.com/PRIMERGY

Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment.
Using our global know-how, we aim to resolve issues of environmental energy efficiency through IT.
Please find further information at http://www.fujitsu.com/global/about/environment/

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CONTACT
FUJITSU LIMITED
Mies-van-der-Rohe-Straße 8
80807 München
Germany
Website: www.ts.fujitsu.com
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